

AMENDMENT

Serial No. 09/523,237

Atty. Docket No. GP068-03.CN1

Amendments to the Claims

Claims 1-491 (Cancelled)

492. (Presently Amended) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions, wherein said first base sequence contains a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety,

wherein said amplification oligonucleotide does not include a label, and

wherein said amplification oligonucleotide is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions; and

an RNA polymerase a nucleic acid polymerase.

493. (Cancelled)

494. (Previously Added) The kit of claim 492, wherein said amplification oligonucleotide includes a promoter sequence.

495. (Cancelled)

496. (Previously Added) The kit of claim 492 further comprising an oligonucleotide probe capable of specifically hybridizing to a base sequence contained in said extension product or said transcription product to form a duplex stable for detection in the presence of non-target nucleic acid in said sample under nucleic acid assay conditions.

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497. (Previously Added) The kit of claim 496, wherein said probe contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

498. (Previously Added) The kit of claim 496, wherein said probe includes a label.

499. (Previously Added) The kit of claim 492 further comprising a target capture oligonucleotide having a third base sequence, wherein said third base sequence hybridizes to a fourth base sequence contained in said target nucleic acid under nucleic acid assay conditions.

500. (Previously Added) The kit of claim 499, wherein said third base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

501. (Previously Added) The kit of claim 499, wherein the 3' terminus of said target capture oligonucleotide is capped or blocked to prevent or inhibit its use as a template for nucleic acid polymerase activity.

502. (Previously Added) The kit of claim 499 further comprising a solid support for directly or indirectly immobilizing said target capture oligonucleotide, wherein said target capture oligonucleotide includes a fifth base sequence which does not hybridize to said target nucleic acid under nucleic acid assay conditions.

503. (Cancelled)

504. (Previously Added) The kit of claim 492 further comprising written instructions for performing a transcription-based method of amplification.

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505. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions, wherein said first base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, and wherein said amplification oligonucleotide is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions; and

a labeled oligonucleotide probe capable of specifically hybridizing to a base sequence contained in said extension product or said transcription product to form a duplex stable for detection in the presence of non-target nucleic acid in said sample under nucleic acid assay conditions.

506. (Previously Added) The kit of claim 505 further comprising a nucleic acid polymerase.

507. (Previously Added) The kit of claim 506, wherein said polymerase is an RNA polymerase.

508. (Previously Added) The kit of claim 505, wherein said amplification oligonucleotide includes a promoter sequence.

509. (Previously Added) The kit of claim 505, wherein said amplification oligonucleotide does not include a label.

510. (Previously Added) The kit of claim 505, wherein said probe contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

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511. (Previously Added) The kit of claim 505 further comprising a target capture oligonucleotide having a third base sequence, wherein said third base sequence hybridizes to a fourth base sequence contained in said target nucleic acid under nucleic acid assay conditions.

512. (Previously Added) The kit of claim 511, wherein said third base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

513. (Previously Added) The kit of claim 511, wherein the 3' terminus of said target capture oligonucleotide is capped or blocked to prevent or inhibit its use as a template for nucleic acid polymerase activity.

514. (Previously Added) The kit of claim 511 further comprising a solid support for directly or indirectly immobilizing said target capture oligonucleotide, wherein said target capture oligonucleotide includes a fifth base sequence which does not hybridize to said target nucleic acid under nucleic acid assay conditions.

515. (Previously Added) The kit of claim 505 further comprising written instructions for performing a polymerase chain reaction method of amplification.

516. (Previously Added) The kit of claim 505 further comprising written instructions for performing a transcription-based method of amplification.

517. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

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a first amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid 5' to said target sequence under amplification conditions; and

a second amplification oligonucleotide containing a third base sequence which hybridizes to a fourth base sequence contained in a nucleic acid sequence complementary to at least a portion of said target nucleic acid 3' to said target sequence under said amplification conditions,

wherein at least one of said first and third base sequences contains a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, and

wherein each of said first and second amplification oligonucleotides is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions.

518. (Previously Added) The kit of claim 517, wherein each of said first and third base sequences contains at least one ribonucleotide modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

519. (Previously Added) The kit of claim 517 further comprising a nucleic acid polymerase.

520. (Previously Added) The kit of claim 519, wherein said polymerase is an RNA polymerase.

521. (Previously Added) The kit of claim 517, wherein at least one of said first and second amplification oligonucleotides includes a promoter sequence.

522. (Previously Added) The kit of claim 517, wherein neither of said first and second amplification oligonucleotides includes a label.

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523. (Previously Added) The kit of claim 517 further comprising an oligonucleotide probe capable of specifically hybridizing to a base sequence contained in said extension product or said transcription product to form a duplex stable for detection in the presence of non-target nucleic acid in said sample under nucleic acid assay conditions.

524. (Previously Added) The kit of claim 523, wherein said probe contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

525. (Previously Added) The kit of claim 523, wherein said probe includes a label.

526. (Previously Added) The kit of claim 517 further comprising a target capture oligonucleotide having a fifth base sequence, wherein said fifth base sequence hybridizes to a sixth base sequence contained in said target nucleic acid under nucleic acid assay conditions.

527. (Previously Added) The kit of claim 526, wherein said fifth base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

528. (Previously Added) The kit of claim 526, wherein the 3' terminus of said target capture oligonucleotide is capped or blocked to prevent or inhibit its use as a template for nucleic acid polymerase activity.

529. (Previously Added) The kit of claim 526 further comprising a solid support for directly or indirectly immobilizing said target capture oligonucleotide, wherein said target capture oligonucleotide includes a seventh base sequence which does not hybridize to said target nucleic acid under nucleic acid assay conditions.

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530. (Previously Added) The kit of claim 517 further comprising written instructions for performing a polymerase chain reaction method of amplification.

531. (Previously Added) The kit of claim 517 further comprising written instructions for performing a transcription-based method of amplification.

532. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

a first amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid 5' to said target sequence under amplification conditions;

a second amplification oligonucleotide containing a third base sequence which hybridizes to a fourth base sequence contained in a nucleic acid sequence complementary to at least a portion of said target nucleic acid 3' to said target sequence under said amplification conditions,

wherein at least one of said first and third base sequences contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, and

wherein each of said first and second amplification oligonucleotides is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions; and

a labeled oligonucleotide probe capable of specifically hybridizing to a base sequence contained in said extension product or said transcription product to form a duplex stable for detection in the presence of non-target nucleic acid in said sample under nucleic acid assay conditions.

533. (Previously Added) The kit of claim 532, wherein each of said first and third base sequences contains at least one ribonucleotide modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

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534. (Previously Added) The kit of claim 532, wherein at least one of said first and third base sequences includes a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

535. (Previously Added) The kit of claim 532 further comprising a nucleic acid polymerase.

536. (Previously Added) The kit of claim 535, wherein said polymerase is an RNA polymerase.

537. (Previously Added) The kit of claim 532, wherein at least one of said first and second amplification oligonucleotides includes a promoter sequence.

538. (Previously Added) The kit of claim 532, wherein neither of said first and second amplification oligonucleotides includes a label.

539. (Previously Added) The kit of claim 532, wherein said probe contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

540. (Previously Added) The kit of claim 532 further comprising a target capture oligonucleotide having a fifth base sequence, wherein said fifth base sequence hybridizes to a sixth base sequence contained in said target nucleic acid under nucleic acid assay conditions.

541. (Previously Added) The kit of claim 540, wherein said fifth base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

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542. (Previously Added) The kit of claim 540 wherein the 3' terminus of said target capture oligonucleotide is capped or blocked to prevent or inhibit its use as a template for nucleic acid polymerase activity.

543. (Previously Added) The kit of claim 540 further comprising a solid support for directly or indirectly immobilizing said target capture oligonucleotide, wherein said target capture oligonucleotide includes a seventh base sequence which does not hybridize to said target nucleic acid under nucleic acid assay conditions.

544. (Previously Added) The kit of claim 532 further comprising written instructions for performing a polymerase chain reaction method of amplification.

545. (Previously Added) The kit of claim 532 further comprising written instructions for performing a transcription-based method of amplification.

546. (Previously Added) The kit of claim 505, wherein said first base sequence contains a cluster of least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

547. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions, wherein said first base sequence contains a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, wherein said amplification oligonucleotide is not labeled, and

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wherein said amplification oligonucleotide is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions; and
a nucleic acid polymerase.

548. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions, wherein said first base sequence contains a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, and wherein said amplification oligonucleotide is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions;

an oligonucleotide probe capable of specifically hybridizing to a base sequence contained in said extension product or said transcription product to form a duplex stable for detection in the presence of non-target nucleic acid in said sample under nucleic acid assay conditions; and
a nucleic acid polymerase.

549. (Previously Added) The kit of claim 548, wherein said probe contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

550. (Previously Added) The kit of claim 548, wherein said probe includes a label.

551. (Previously Added) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:

an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions,

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wherein said first base sequence contains a cluster of at least four ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety, and wherein said amplification oligonucleotide is capable of being extended and forming part of a nucleic acid extension product or directing the synthesis of a nucleic acid transcription product under said amplification conditions; a target capture oligonucleotide having a third base sequence, wherein said third base sequence hybridizes to a fourth base sequence contained in said target nucleic acid under nucleic acid assay conditions; and a nucleic acid polymerase.

552. (Previously Added) The kit of claim 551, wherein said third base sequence contains one or more ribonucleotides modified to include a 2'-O-methyl substitution to the ribofuranosyl moiety.

553. (Previously Added) The kit of claim 551, wherein the 3' terminus of said target capture oligonucleotide is capped or blocked to prevent or inhibit its use as a template for nucleic acid polymerase activity.

554. (Previously Added) The kit of claim 551 further comprising a solid support for directly or indirectly immobilizing said target capture oligonucleotide, wherein said target capture oligonucleotide includes a fifth base sequence which does not hybridize to said target nucleic acid under nucleic acid assay conditions.

555. (Presently Amended) A kit for amplifying a target nucleic acid sequence contained in a target nucleic acid which may be present in a sample, said kit comprising:
an amplification oligonucleotide containing a first base sequence which hybridizes to a second base sequence contained in said target nucleic acid under amplification conditions, wherein said first base sequence contains a cluster of at least four ribonucleotides modified to

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include a 2'-O-methyl substitution to the ribofuranosyl moiety, and wherein said amplification oligonucleotide ~~is capable of directing the synthesis of a nucleic acid transcription product under said~~
~~amplification conditions~~ contains a promoter sequence; and
a nucleic acid polymerase.